CONTENTS

Numbers 1–2, February–April 1975

Physical Sciences Section

Oxidaion of sulphonamides with lead tetraacetate
TANWEER A. CHAUDRI 1

Cyclic voltammetric studies. Part III. Stability of 4-nitroaniline and 1-nitronaphthaline anion radical intermediates in alcoholic, nitrilic and mixed solvent system
MAHBOOB MOHAMMAD, RIAZ AHMAD, JASIM M. TAQUI, M. IQBAL and S.U. SHEIKH . 4

A single sweep cyclic voltammetric method for determining the rate of decomposition of ionic species generated on a stationary electorde and undergoing ECE mechanism
MAHBOOB MOHAMMAD . . . . . .

Microanalysis by amplification: determination of platinum and uranium
M.H. HASHMI, FARHAT RAFIQUE CHUGHTAI, N.A. CHUGHTAI and TEHSEEN QURESHI . 9

Studies in the chemical constituents of the fruits of *Cucumis prophetarum* Linn
MOHAMMAD ATAULLAH KHAN and FATIMA ZEHRA 12

Short Communications

Reactions of diazenes
S.M. ABDUL HAI and (Miss) ASIFA BEGUM 15

Determination of the particle size and specific surface of crystalline lead monoxide
A. RAUF 16

Biological Sciences Section

Chemosterilization of laboratory-reared *Aedes aegypti* (L) by substituted-phosphine oxides and phosphorus amides
(Miss) SHAMS MOHIUDDIN and SALEEM A. QURESHI 18

Immature stages of *Phricodus pakistanesis* Hamid (Heteroptera : Pentatomidae) and notes on its biology
A. HAMID and B. HAMID 22

The symbiote of the membracid *Tricentrus assamensis* versus pathological cell-inclusions
S. MAHDIHASSAN 26

Some parasites of cats in Karachi
FATIMA MUJIB BILQUEES and NEELOFER ISRAR 29

Preparation of amyloglucosidase by solid substrate fermentation
M. A. QADEER and J. I. ANJUM 36

Isolation and purification of amylase from rat pancreas
R. RAWALA and S. S. AHMAD 40

Translocation studies with monocrotophos in pumpkin plants by granule impregnation technique
(Miss) REHANA AIJAZ, M.M. H. BAIG and (Miss) SHAHIDA ZAFAR . . . 46

Amino acid composition and nutritive value of rice varieties Basmati-370 and IR-6 grown in Peshawar region
MOHAMMAD WAHID, TAJAMMAL HUSSAIN, RASUL BAKSH and HABIBUR REHMAN . . 51

Antifertility properties of the nonsaponified fraction of *Psoralia corylifolia* in the adult female rats
ZAHIRUDDIN KHAN and (Miss) FAUZIA SAMAD 54

Technology Section

The effect of nitrogen and phosphorus on the yield and extractability of protein from *Trifolium alexandrium*
F.H. SHAH N.A. MAHMUD, ZIAUR RAHMAN and I.H. SHAH . . . 57

CONTENTS

Isolation and identification of mustard seed cake detoxifying microorganisms
F. H. SHAH, A. MAJID and SHAUKAT ALI 62

Extraction of alumina from Ziarat laterite by alkaline leaching . . .
R.A. SHAH, A. RAUF and MEHDI HASSAN 65

Fibre and staple crimp in carpet wools . . . . . .
S.M.A. SHAH, TAJ ALI WAZIR and A. A. WAKIL 69

A qualitative survey of Pakistani turpentine oil
MUHAMMAD RAFIQJE, MUHAMMAD NAZIR, MUSHTAQ AHMAD and F.M. CHAUDHARY . 78

Book Notices 82

Numbers 3–4, June–August 1975

Physical Sciences Section . . . . . .

Spectrophotometric determination of titanium after extraction of the Ti(II)–SCN system by high molecular weight amines
BASHIR AHMAD and M. A. KHATTAK 87

Constituents of *Acre pentapomicum*
I. MIR, (MRS.) FAHMIDAH KHAN and A. M. COMRIE 91

Reviews

Alkaloids of some of the plants of the compositae
KARIMULLAH A. ZIRVI and M. IKRAM 93

Diaziridines
S.M. ABDUL HAI, A. WADOOD QURESHI and (Miss) ASIFA BEGUM . . . 96

Short Communication

Analytical application of linear scan and/or cyclic voltammetry peak current . .
MAHBOOB MOHAMMAD and M. ALIMUDDIN 123

Biological Sciences Section

Mites from mammals of West Pakistan
DORALD M. ALLRED 124

Comparative external cephalic morphology of some coreoids (Heteroptera : Coreoidea) with reference to their phylogeny
IMTIAZ AHMAD and MOHAMMAD UMAR SHADAB 133

Rearing the larvae of *Dacus zonatus* in media with inexpensive and readily available agricultural byproducts
MOHAMMAD ASHRAF, ZAFAR A. QURESHI, BILQEES FATIMA, MOHAMMAD DASTAGIR ARIF and ABDUR RAHMAN BUGHIO 143

Morphology and biochemistry of human cataracts studied in Pakistan
T. H. KIRMANI, S.S. AHMAD, R. RAWALA and K. SABIHA 146

Factors affecting the production of proteins by *Azotobacter chroococcum*
M. A. EL-SAYED 151

Short Communications

An alkaline phosphatase from flowers of *Calotropis procera*
M. QUDRAT-E-KHUDA and SITWAT NAEEM 154

Biological pollution (sewerage fungi). Part I
S. IFTIKHAR AHMAD and AHMEDUNISA 156

CONTENTS

Technology Section

The influence of time and method of application of superphosphate on the availability of P to cotton and the P-content of cotton leaves
S.M. SHERE, M.M. IQBAL, S. AHMAD and K.S. MEMON 158

Commercial utilization of *Lilaceae yucca, glauca* (bear grass)
ARBAB ABDUL WAKIL and FAIZULLAH KHAN 162

Agitation leaching of Saindak oxidized copper ore using sulphuric acid
KHADIM HUSSAIN, N. SHAIKH and M. A. QAZI 166

Evaluation of Musakhel limestone for making colourless glass
AHMAD DIN, MOHAMMAD ASHRAF and M. R. ARIFF 171

Effect of cooking on the essential amino acid content and net protein utilization (NPU) of common pulses
S. U. AHMAD, F.H. SHAH and M. M. SHAFIQ CHAUDHRY 175

Studies on the storage stablility of guava fruit juice
W.H. SHAH, N.A. SUFI and S.I. ZAFAR 179

The effect of rootstock and maturity on bitterness in orange juice
MUHAMMAD SULTAN MAHMOOD, M. JAMIL QURESHI and M. SHAFIQ CHAUDHRY . 184

Short Communication

Studies on the different parts of the fleece of Hashtnagri sheep. Part I. Difference in felting potential of loose wool fibres
MUMTAZ AHMAD KHAN 187

Book Notices 190

Number 5, October 1975

Physical Sciences Section

Nitration studies in reserpine
SALIMUZZAMAN SIDDIQUI and MOHAMMAD ATAULLAH KHAN 199

Confirmation of stability of dimethylamino group to Wallach rearrangement
KHURSHID A. KHAN 205

Influence of dielectric constant and ionic strength on the specific rate constant of bromide-persulphate reaction
M. SADIQ SUBHANI and TASNEEM KAUSER 208

The stability constants of Co(II) and pyridine-2-azo-*p*-dimethyl aniline 1: 1 complex in mixed solvents
SHABBIR A. ZUBAIRI 212

Electrooxidation of silver(I) nitrate and silver(I) perchlorate in the presence of 2,2′-bipyridyl in acetonitrile
M. A. A. USMANI and D. B. SCAIFE 214

Microbial Chemistry. Part I. Isolation and characterization of gliotoxin, ergosterol, palmitic acid and mannitol—metabolic products of *Trichoderma hamatum* Bainier
SHAHEEN A. HUSSAIN, RADIA NOORANI and IZHAR H. QURESHI 221

Quantitative thin layer chromatographic estimation of tetracycline antibiotics
SYED FAROOQ ALI 224

CONTENTS

Biological Sciences Section

Production of calcium gluconate by *Aspergillus niger* in 50-l fermenter
M. A. QADEER, M. AFZAL BAIG and O. YUNUS 227

Short Communications

Studies on the quantitative determination and photodegradation of ephedrine
K. USMANGHANI, IQBAL AHMAD and S. M. S. ZOHA 229

Important insect pests of summer legumens in the Punjab
MUSHTAQ AHMAD 230

Technology Section

Studies on the essential oils of the Pakistani species of the family umbelliferae. Part I. *Trachyspermum ammi* (L) Sprague (ajowan) seed oil
MUHAMMAD ASHRAF and MUHAMMAD KHURSHID BHATTY 232

Studies on the essential oils of the Pakistani species of the family umbelliferae. Part II. *Foeniculum vulgare* Miller (fennel) seed oil
MUHAMMAD ASHRAF and MUHAMMAD KHURSHID BHATTY 236

Fabrication of a new type of superconducting junction
A. J. HAMDANI 241

Number 6, December 1975

Physical Sciences Section

Nitration studies in some β-carboline bases. Part I. Mononitro derivatives of rescinnamine
SALIMUZZAMAN SIDDIQUI and SAIRA ISMAIL HAMEED 243

Nitration studies in some β-carboline bases. Part II. Mononitro derivatives of ajmalicine and serpentine
SALIMUZZAMAN SIDDIQUI and SAIRA ISMAIL HAMEED 247

Arrhenius parameters and transitition state theory functions for racemisation of 8,8′-bis(ethoxymethyl) and 8,8′-bis(methoxymethyl)-1,1′-binaphthyl
A. H. DARESHANI, M.E. HAMDARD, K. FATIMA and YASMEEN BADAR 250

Short Communications

Reaction of phthalic anyhdride with 2-aminoethanol hydrocholoride
S. KHAQAN HASAN and S. AHMED ABBAS 253

Electrolysis of diethylacetic acid
NASER-UD-DIN 255

Thermal degradation of poly(tetrahdyrofurfural methacrylate)
A.H.K. YOUSUFZAI, M.M. ZAFAR, (Mrs.) RUQUIA MAHMOOD and SHABIH-UL-HASAN . 256

Biological Sciences Section

Composition of Gurgura (*Reptonia buxifolia*) fruits and its seed oil
ABDUL JABBAR and FAQIR MOHAMMAD 258

Three helminth parasites of the wall lizard Gecko sp.
FATIMA MUJIB BILQUEES and MOHAMMAD HUSSAIN SIDDIQUI 261

Technology Section

Effect of time and method of N application and moisture regimes on uptake of N from N^{15}-labelled ammonium nitrate, urea and ammonium sulphate by wheat
A. HAMID and G. SARWAR 265

CONTENTS

Persistence of toxicity of phosphamidon, dicrotophos, oxydemeton methyl and dimethoate to mustard aphid (*Lipaphis erysimi*) following soil application
SHAHIDA ZAFAR, REHANA AIJAZ and M.M. H. BAIG 269

Studies on the production and storage of tomato juice
W. H. SHAH and S.I. ZAFAR 272

Effect of crease-recovery reagents on physical properties of yarn made from AC-134 cotton
SHABBIR AHMAD, NISAR A. JAMIL, A.H. HANIF and N. AHMAD . . . 277

Short Communications

Some observations on the effects of gamma radiation on eggs of pulse weevils (Coleoptera: Bruchidae)
SHAFQAT AZIZ OPEL and MUHAMMAD KARIMUDDIN AHMAD . . . 284

Production of cobalamin by *Streptomyces olivaceous*
ABOU-ZEID A. ABOU-ZEID and MOHAMMAD R. EL-SHERBEENY . . . 285